THE BACILLUS OF SYPHILIS (!)

While medical journals can in no wise be held responsible for the views of their contributors, there should be some careful censorship. In the *New York Medical Journal,* December 24, 1904, there appears an article by Justin De Lisle, "A Contribution to the Serum Therapy of Syphilis," which to say the least, fairly bristles with statements that must prove misleading to those not familiar with the latest publications on the subject. The bacillus of syphilis has been isolated, demonstrated and successfully cultivated upon artificial media (?)! M. v. Niessen, for the last number of years, persistently claimed that he had found and successfully cultivated the syphilis bacillus. Neither his publications nor his claims were taken seriously, as they lacked scientific precision. Later, Joseph and Piorkowsky demonstrated a bacillus of the pseudo-diphtheria type which they were able to grow on placental media and which was demonstrable only in the sperma and blood of syphilitics. Winternitz, Waelsch, and Pick were able to isolate a similar bacillus, but Pick cautiously *termed* it a pseudo-diphtheria bacillus present in syphilitics. This bacillus and the v. Niessen bacillus proving identical, together with the fact that extravagant claims were made by Paulsen and others for results with syphilitic serum treatment, caused Pick to turn over to Waelsch the large material of his clinic to demonstrate the exact scientific status of the bacillus above mentioned, the "Gesellschaft zur Foerderung Deutscher Wissenschaft, Kunst und Literatur in Boehmen," allowing the necessary funds. The investigations covering this tremendously tedious and exhaustive work representing cultures, animal inoculations, etc., were published in the January, 1904, number of the *"Archiv für Dermatologie und Syphilis."* The result shows that the bacillus is not the syphilis bacillus, but is a saprophite found present in a greater or lesser percentage of syphilitics. The claims of cures with serum by De Lisle are hardly rational, as we know the exquisite chronicity of the disease as well as its eccentricities in the appearance and disappearance of symptoms. Of more than passing interest is the demonstration of a horse inoculated with syphilitic blood showing a papular rash and adenopathy, by Piorkowsky to the Berlin Medical Society. Dermatologists of note claimed that the lesion resembled syphiloderma most closely; veterinarians had never seen a similar rash; histopathologists pronounced the specimens nonspecific, and Aronsohn, who has had great experience with serum work, claims to have seen similar eruptions in several of his horses injected with other bacteria. This all tends to prove that while scientific research and experiment is most essential for progress, no extravagant and unsupported conclusions misleading to the practitioner should be drawn and published. Up to date the bacillus of syphilis has not been demonstrated, nor is there a syphilitic serum treatment of any merit.

SURGICAL INTERFERENCE IN TUBERCULOSIS OF THE BLADDER.*

By GRANVILLE MacGOWAN, M. D., Los Angeles.

OCCASIONALLY in medicine and surgery one has to do practically things which jar one's theories. I believe that genital and urinary tuberculosis does best, usually, under medical treatment, and I have been very much impressed with the results obtained by my friend, Dr. Chismore, by hygienic means alone. Yet in my practice cases have come up where it seemed to me more radical measures were needed, and their application has furnished the material for this report.

Through this experience I must differ from many who deprecate ever interfering surgically in vesical tuberculosis. When the distress is great and the cystoscope shows tuberculous ulcerations in a bladder that will hold 100 cc. or more under anesthesia, after a reasonable trial of constitutional treatment, urinary antiseptics, instillations of sublimate, etc., without benefit, I would resort to the sharp curette. Curettement must not be gentle and ladylike, but firm and rough in order to be curative. Much of the benefit of curettage of tuberculous lesions is to be attributed to the inflammatory changes set up around the foci, destroying them. Tubercles wherever found must be dealt with mercilessly or let alone. I have had no experience in the curettage of bladders through the urethra, for my practice is greater with males, and my female patients have, with one exception, either been cured or so greatly alleviated by medical treatment that surgical interference was not necessary.

Suprapubic section should be done and the anterior bladder wall firmly fastened by catgut to the transversalis fascia and the recti muscles to protect the space of Retzius during and after the operation. Laterally it should be attached temporarily to the abdominal muscles by silk or Florentine sutures left long enough to be used as retractors. The bladder should be dried and then explored by aid of electric light. The most satisfactory instruments to use for this are the Nitze electric operating forceps or the Bransford Lewis female cystoscope, with which one can easily view all portions of the bladder through the wound. If the ulcers are few in number and favorably situated, aided by the pressure of the hand of an assistant within the rectum, they may be fished up by tenaculi, curetted, excised and the edges of the wound brought together with fine catgut. If, as is usually the case, the ulcers are numerous and small, or the lesions be chiefly miliary or consist of elevated patches, or the tubercles few but disseminated in a sodden and gelatinous mucous membrane, very rough curettage of the entire mucous surface should be practiced with sharp curettes. The dermal curettes of Prince Morrow, the antrum curettes of Myles, the cup-shaped bone curettes of Tiemann and the flat bladder curettes of Bazy will be found very useful for this work. It is best, also, to thoroughly dilate the vesical neck and the prostatic urethra with uterine or Kollman's curved urethral dilators so as to avoid subsequent tenesmus. Hemorrhage is lessened by the free use of a solution of epinephrin in the bladder before operation and readily stilled afterward with hot water at a temperature of 130° F., care being taken to protect the skin of the abdomen and thighs from irritation by smearing with sterilized vaseline. The bases of ulcers after curetting should be touched with a 50% solution of zinc chlorid or pure lactic acid upon fine swabs, or by a Paquelin microbrenner or electric cautery point through a caisson.

During the first twenty-four hours the bladder should be irrigated every half hour with hot normal salt solution, and hypodermic injections of seven drops of solution of epinephrin 1-1,000 be given to in-

*Read at the Thirty-fourth Annual Meeting of the State Society, Paso Robles, April, 1904.

sure perfect hemostasis. Subsequent treatment should consist of suprapubic drainage by means of the large De Pezzer tubes, and washing the bladder once or twice daily with a warm solution of sublimate 1-100,000 introduced from the urethra through a catheter by a hand syringe, until the urine becomes clear, which will be in from two to six weeks.

I report the following ten cases; the first patient was not operated upon by me, but was under my observation a long time after operation. The results obtained in cases 2, 3, 4 and 5 certainly justify the measures used. If the others have a value it probably teaches that in cases where tuberculous process has invaded the whole bladder structure, and where there is a thick, contracted, brittle bladder that will not hold more than 30 to 50 cc. under deep anesthesia, surgical interference may be tried as a last resort, but will probably not prove beneficial. If the tuberculosis is descending from the kidney my experience coincides with that of others that the removal of the kidney is generally necessary to quiet the cystitis, and the ulcerations will then usually heal. In reviewing these cases one cannot but be impressed: First, by the role played primarily in their development by gonorrhea; second, the ground having been prepared by the gonococcus, the tubercle bacillus found entrance through the open door furnished by chemical or traumatic insults to the vesical mucous membrane during treatment for gleet or urethral stricture; third, nearly all were free from consumption, that is from tuberculosis of the respiratory organs.

Case 1, June 30, 1893. John S., aged 36, plumber, married. A robust, muscular man of great strength and endurance. No history of gonorrhea.

In 1887 he was suddenly seized with an irrepressible desire to urinate. Great pain followed, and that has continued ever since. In 1889 Brewer, of New York, did a perineal section upon him, with temporary relief only. In 1892 Dr. Bolton Bangs did a suprapubic cystotomy upon him. He was drained for six weeks, but with no noticeable improvement. Sent to California he came under my care, with urinary frequency every fifteen minutes during the day, and a rubber diaper was worn at night. The pain was intense, and referred to the glans, upon which he pulled vigorously at each act of micturition. Suprapubically there was pain where the right ureter crosses the pelvic brim. While urinating he stood on one leg, and had spasmodic contraction of all of his abdominal and spinal muscles. General examination negative. Scars of perineal and suprapubic operations. Cicatrix of fistula on right side of scrotum. Prostate and seminal vesicles nodular. Perivesculitis. Bladder contracted and thick walled. Bladder capacity under chloroform anesthesia, 90 cc. Urine amber; sp. g. 1020, contained debris, sometimes blood, pus, tubercle bacilli, and ¼% of albumin. Cystoscopic examination: Light rays absorbed at summit; trigone and bladder neck congested and gelatinous; ulcerated surfaces, some superficial, some excavated upon lateral and posterior bladder walls.

Internal Treatment.—Gaduol and creosote irregularly. Local treatment—Injections of iodoform in glycerin and olive oil, with detriment. For several years at intervals of several months, he received daily instillations of sublimate, 1-10,000 to 1-7,000, with marked benefit, so that he could retain his urine for two hours, and was able to discard his rubber diaper. He grew so well that he attempted, with others, to rob a bank by tunneling a long distance under ground. The attempt failed, and he was forced to flee the country, and, I am informed, was hanged in Dawson in 1900. He had a child born in 1892, during the active period of his tuberculosis. This seemed to be entirely healthy, and even robust, in 1896. Under observation nine years.

Case 2, Aug. 7, 1893. J. T. C., single, aged 27, coachman. No hereditary tendencies. Habits good. Gonorrhea two years ago, followed by spasmodic stricture. Five months ago drove in a rainstorm for five hours, and immediately his bladder became irritable and his urine purulent, but without preceding pain or chill. For this he was treated by a quack who introduced sounds every three days and irritated his bladder with a guessed strength of silver nitrate, using a fountain syringe and a catheter. The result was bad. Frequency twenty minutes, with great urgency and hematuria. He has lost weight. Physical power lessened, digestion impaired, and is greatly depressed mentally.

Examination.—Heart, lungs and abdominal organs negative. No temperature or night sweats. Testicles, prostate, seminal vesicles and urethra healthy. Bladder capacity 40 cc. Urine, obtained by catheter, alkaline; sp. g. 1016! contains triple phosphates, microorganisms, blood, pus, ropy mucus, and albumin 1%. Daily quantity about 2100 cc. The pus and mucus equals about one-half of the bulk.

This case was supposed to be one of simple cystitis, aggravated by traumatic and chemical irritation, and under appropriate treatment he improved until his urinary frequency was reduced to once in three hours. About October 4th his bladder capacity was 120 cc,. but his urine remaining purulent, I made a cystoscopic examination. Upon the summit of the bladder were several large ulcers, apparently traumatic. On inquiry I found that his physician had always depressed the handle of the steel sounds far down between the thighs, stating that this was necessary to be sure the instrument had entered the bladder. After each passage of these bougies he had had a dull pain above the pubes. Scattered over the lateral quadrants and the fundus were a large number of miliary tubercles. In some places minute ecchymoses surrounded with hyperemic zones and stellate enlarged capillaries could be seen, while in others necrosis involving the mucous membrane had formed small, irregular ulcers. There was but little general thickening of the bladder wall. The mucous membrane about the bladder neck was edematous and congested. There was no ill effect from this examination. A few days afterward I essayed an injection of 1% solution of resorcin. This was followed by considerable disturbance, which I thought I would allay by a 1-10% instillation of iodin trichlorid. The irritation following was unbearable, and necessitated sectio-alta on October 20th.

The superior bladder wall was thickened, and there was a peri-cystitis with adhesions of the anterior peritoneal fold. Under electric light I curetted the bladder thoroughly, and touched each ulcer or tubercle with either silver nitrate fused on a silver probe, or with pure carbolic acid. He made a good recovery. Internally he received salol and boric acid with elixir of gaduol and creosote. Daily irrigations were made with lactate of silver, 1-20,000. After the operation his urine became acid, but remained moderately purulent. The bladder capacity increased to from 250 to 300 cc., and he resumed his occupation as a coachman.

In March, 1894, a second cystoscopic examination was made. The ulcers had disappeared, but brown patches marked their position, and the mucous membrane had generally lost its lustre. Soon afterward he returned to England. No tubercle bacilli were found in his urine at any time, though sought for frequently. Under observation one year.

Case 3, April 30, 1894. Chas. N. S., American, aged 30, single, fruit merchant. From his second to his twenty-fourth year had abscesses of right hip joint. At 26 had gonorrhea for four months. Never free from pain in bladder since. Until 24 was a frequent masturbator. For three years has had urinary frequency, dysuria, tenesmus and the passage of blood at the end of micturition. Has been treated for stricture by the passage of sounds. The pain during urination is referred to the glans, and relief seems to be afforded by drawing upon the penis. There is a continuous burning pain on the left side of the abdomen corresponding to the spot where the ureter dips into the pelvis, and there is the sensation of the pricking of a briar at the peno-scrotal junction, and the feeling as if a cockleburr were stuck in the perineum. Urinary frequency hourly during the day and two hours at night.

General Examination.—Negative. Large varicocele on left side; prostate healthy; seminal vesicles distended and sensitive, but not nodular; urethra very hyperesthetic, but no strictures or ulcers; urine acid, sp. g. 1024; contains blood, pus, microorganisms, columnar, pavement and tailed epithelial cells, but no tubercle bacilli or gonococci. Bladder capacity 200 cc., but any attempt to exceed this quantity causes a sudden painful spasm, requiring immediate urination.

Cystoscopic Examination.—On the right lower quadrant posteriorly were a half dozen small hyperemic nodules. On the left posterior wall about 20 millimeters back of the uretheral mouth was a large irregular excavated ulcer with undermined scalloped edges, and a yellowish gray base surrounded with a narrow bright red hyperemic zone which looked as if it had been formed by the fusion of a group of small ulcers. The trigone and vesical neck were edematous and congested.

He was treated for four months internally with creosote, codliver oil, guiacol, iodoform and sulphurous acid; locally with irrigations of silver lactate, boro salycilic solution, resorcin, carbolic acid, iodin trichlorid, and emulsions of iodoform with glycerin or fluid vaselin, receiving in addition anaglesics, by the mouth and as suppositories, without any noticeable benefit. I then did sectio-alta, curetted the smaller foci and cauterized each with a fine Paquelin point through a caisson, fished up the left posterior bladder wall with a tenaculum assisted by the pressure of the hand of an assistant in the rectum, removed the ulcer with knife, scissors and sharp curette, cauterized its base with the Paquelin, overstretched the urethra from the meatus to the bladder, and drained the bladder suprapubically for four weeks by the De Pezzer tubes. Daily irrigations with 1-20,000 solution of silver lactate. The material cut and scraped away from the ulcer contained tubercle bacilli.

For several months afterward he received daily instillations of 1-10,000 solutions of sublimate. The result was excellent. The ulcer cicatrized entirely, the urinary frequency was reduced to six or seven times for the twenty-four hours, only twice at night. The bladder capacity was so increased that he frequently could hold 480 cc.

When seen last, in 1904, he still remained comfortable. Length of observation ten years.

Case 4, January 26, 1895. John H., 48 years old, Irish, laborer, single, of good habits. Gonorrhea in 1892. In 1893 internal urethrotomy for urethral stricture. Six months later he had cystitis, and ever since has been compelled to rise at night four or five times. The capacity of the bladder is irregular; sometimes he can hold 500 cc., sometimes only 100 cc. No noticeable hematuria.

Examination.—Respiratory murmur and percussion resonance impaired on right side. Has stomachic and intestinal indigestion, with constipation and frequent attacks of biliousness. No rectal disease. Genital organs healthy. Bladder capacity 480 cc. The urethra will generally take a No. 20 F. steel olive-tipped bougie easily, but sometimes there are irritable spasms at the meatus and in the bulb, preventing the passage of any soft instrument.

Cystoscopic Examination.—February 1. Much floating mucus and pus shreds. The mucous membrane about the bladder neck was edematous and gathered into large folds giving the impression of a neoplasm. Upon the bladder summit was a large irregular ulcer with hemorrhagic discolorations of its edges which looked as if caused by repeated traumatisms. The mucous membrane of the entire bladder was without gloss, and looked thickened. Upon inquiry I found he had had large sounds passed every second day for many months, the handle being depressed far down between the thighs, and he had also been having permanganate solutions, 1-500, and sublimate, 1-2,000, by injections through a catheter with resulting increase of discomfort.

His urine was acid, and contained ¼% albumin, much pus, a few red blood cells and abundant microorganisms. I believed we were dealing with a gonorrheal cystitis, aggravated by violence, and used a salycilic wash 1-3,000 by the Janet method daily until June, with balsamics; santal harlem oil, eucalyptus and wintergreen oils, and later salol and boric acid. His urine grew clearer and the frequency less. In June I cystoscoped him a second time. The bladder wall in general more closely approached that pink-stained straw color that is natural, but was blotched by brownish discolorations marking preceding hemorrhages or healed erosions. At the extreme summit the rays were entirely absorbed. The edema had disappeared almost entirely at the base, and one could see plainly a few scattered red and white nodules shining through the mucus membrane, and a few stellate or web-like patches of blood vessels centering on hemorrhagic spots in the submucous tissues. I believed that his cystitis was gonorrheal plus the irritation of traumatism and strong chemical solutions. The treatment was continued with marked benefit until the following September, borocitrate of magnesia, and later hexamethylene-tetramine being added to the therapeutics of internal treatment.

In January, 1899, he had an acute gonorrhea, which was complicated in February by double epididymitis. He dismissed himself as cured April 20th. Discharge had ceased, the epididymitis had disappeared, his prostate and seminal vesicles felt normal, but there was a considerable pus in his urine. He refused to be cystoscoped. In July, 1899, he returned, complaining of pain and burning in the bladder and tenderness upon pressure above the pubes. Urine removed from the bladder by the catheter contained pus. I suspected urinary tuberculosis, and remembering the peculiar appearance of the bladder wall, the cystoscope was introduced again, but did not give a very satisfactory view on account of both cystospasm and urethrospasm. The urine was examined for tubercle bacilli several times with negative results. It swarmed with other microorganisms. The examination seemed to do him good for a time, for there was less pain and frequency.

In October he complained of frequent and urgent micturition during the day, but except for great polyuria was comfortable at night. I saw him once or twice a month until August, 1900, his condition remaining much the same. He received methyline blue, santal oil, saw palmetto, triticum, oil eucalyptus, methyl salicylate, guiacol carbonate, creosote, gaduol, aspirin, hexamethylene-tetramine, borocitrate of magnesia internally, and his bladder was washed with boric acid 1-500, silver lactate 1-5,000, borolyptol 1-100, and sublimate 1-100,000, without benefit.

He was then cystoscoped for the fourth time. The whole mucous membrane seemed to be studded with miliary tubercles varying in color from light pearl to bright red. Some had undergone cheesy degeneration. I then immediately did sectio-alta. The summit was tightly adherent to the peritoneal fold. The bladder wall was generally and vigorously curetted and the outlet stretched. The few tubercle foci which had ulcerated were very irregular in form. The curettement was almost brutal in its severity. The hemorrhage was great, but was controlled by the use of a continuous stream of hot water to 130° F. He was drained suprapubically through a De Pezzer tube as described by the writer elsewhere, (Journal Cut. and G. U. Diseases, May 1900). At the end of 20 days, when the urine had become clear, the tube was removed, and the track healed in 24 hours.

After the operation the bladder was irrigated daily with sublimate 1-100,000, and he took hexamethylene-tetramine grammes 1.5 and methyline blue .045 daily. For the following two months he received instillations of sublimate 1-8,000 every third day, and had daily inunctions of a mixture of guiacol in olive oil 1.4 over the bladder each day.

In November, 1900, he went back to work as a switchman for the Southern Pacific Railroad. There was still microscopically a very little pus in the urine. I saw him last in November, 1903. He had had no further treatment, had no pain, no annoyance at night, no frequency during the day and clear urine. He recently had undergone a gastro enterostomy for pyloric stenosis, the cause of his dyspeptic symptoms.

Many examinations were made for tubercle bacilli in this man's urine between January, 1896, and November, 1900, but none were ever found. Yet this was a distinctive case of primary vesical miliary tuberculosis. He had no temperature before his operation, no hectic, and no night sweats. After operation his temperature rose once to 101°, and during the last week he was in bed he had some night sweats, but these disappeared after he was out and about.

Case 5, July 11, 1900. S. S. L., aged 27, single. Previous history: When twelve he commenced to urinate frequently but without pain, for which his meatus was cut without benefit. From the age of eighteen he has had frequent and painful urination. He has been treated with sounds and dilators, and his bladder injected by many physicians. He had the rest cure and instillations of nitrate of silver; the former did not benefit him, and the latter made him distinctly worse. There is always pus in his urine, and at times blood. No tubercule bacilli have ever been found. Bladder capacity 120 cc. Pain begins just before urination, and is excruciating. He urinates every hour during the day and 15 to 20 times at night. He is a tall, well-built man, who is strong, but who looks tired.

General examination negative. Urethra hyperesthetic. Prostate normal. Seminal vesicles not enlarged or nodular, but pressure upon either of them causes the same kind of pain that he experiences when urinating. Urine acid, purulent, bacterial, contains traces of albumin, but no tubercle bacilli.

Cystoscopic Examination.—Bladder walls thick and congested. On the summit are some brown pigment spots; on the lateral segments and around the ureters there is a purplish, gelatinous, edematous, puffy appearance. On the right lower quadrant there is a superficial ulcer about 1½ cm. in diameter, with yellow base and scalloped edges. The whole picture was one of a certain form of tuberculosis of the bladder. There was no ill effect from the examination.

Treatment.—Instillations of sublimate 1-20,000 gradually increased to 1-12,000. At the latter strength it produced so much irritation that the patient was confined to his bed for several days. Injections of eka iodoform in oil of sesame and in liquid vaseline was essayed, but also caused much pain, and was abandoned. In January, 1901, he was confined to his room, and often had to pass water 30 times at night. We then began instillations of bichlorid 1-50,000 daily. He grew gradually better, and the strength was increased to 1-23,000. He persisted in playing golf without proper protection, and had another relapse. I advised a supra-pubic cystotomy, which we did March 23, 1901.

There was a chronic cystitis. A few tubercles were visible in the edematous mucus membrane, and many enlarged glands produced a granular appearance in some places. I vigorously curetted the ulcer and all of the bladder wall that I could reach with my large sharp curettes. I then dilated the urethra to 45 F. with Kollman's' dilator, and curetted it with a small sharp uterine curette. The bleeding was stilled with hot water. There was a peculiar small fibroid band in the anterior part of the trigone, which I severed. Drainage by the De Pezzer tube supra-pubically, and a retention catheter in the urethra. The latter was irrigated every hour to insure free drainage. He remained in the hospital until May 4th. He developed phlebitis of the left leg in the middle of April. This disappeared in about three weeks. The drainage was removed April 27th. When he left the hospital he was urinating comfortably five or six times during the day and twice at night. He was given hexamethylene-tetramine and general tonics during the summer, and lived at the seaside.

He now rises only once at night, and has to pass water only every four or five hours during the day. His bladder will hold 250 cc., and he can go to the theater or to any evening entertainment without fear and with comfort, a thing he had not been able to do since childhood. He occupies a position of trust, and is able to work. I saw him February 1st, 1904. He is still well. Under observation nearly four years.

(To be continued.)

Prosecutions in San Francisco.

The first three cases to be heard under the present arrangement whereby illegal practitioners are prosecuted by the County Medical Society, resulted in prompt convictions, with a fine of $100 in each case. The convicted were Waller, Richman and Parlow. This certainly is very encouraging and promises well for the future work of the committee.